IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Anna Belle Williams; Cecilia A. Trevino; Frank R. Walker, Jr.; Guy A. Schweppe; David W. Bulger; Jonathan B. Safran; Patrick W. Lynch		
Assignee:	Dell Products, L.P.		
Title:	Continuity Of Supply Risk And Cost Management Tool		
Serial No.:	09/896,992	Filing Date:	July 2, 2001
Examiner:	Beth Van Doren	Group Art Unit:	3623
Docket No.:	DC-02825	Customer No.:	33438

Austin, Texas
May 8, 2008

Electronically Filed

SUPPLEMENTAL APPEAL BRIEF UNDER 37 CFR § 41.37

Dear Sir:

Applicant submits this Supplemental Appeal Brief pursuant to the Notice of Appeal filed in this case on February 29, 2008 and the Notification dated May 7, 2008. The fee for the Appeal Brief was previously paid electronically via the USPTO EFS. The Board is authorized to deduct any other amounts required for this appeal brief and to credit any amounts overpaid to Deposit Account. No. 502264.

I. REAL PARTY IN INTEREST - 37 CFR § 41.37(c)(1)(i)

The real party in interest is the assignee, Dell Products L.P. as named in the caption above and as evidenced by the assignment set forth at Reel 012430, Frame 0052.

II. RELATED APPEALS AND INTERFERENCES - 37 CFR § 41.37(c)(1)(ii)

Based on information and belief, there are no appeals or interferences that could directly affect or be directly affected by or have a bearing on the decision by the Board of Patent Appeals and Interferences in the pending appeal.

III. STATUS OF CLAIMS - 37 CFR § 41.37(c)(1)(iii)

Claims 2-16 and 48 are pending in the application. Claims 1 and 17-47 have been cancelled. Claims 2-16 and 48 stand rejected. The rejection of claims 2-16 and 48 is appealed. Appendix "A" contains the full set of pending claims.

IV. STATUS OF AMENDMENTS - 37 CFR § 41.37(c)(1)(iv)

No amendments after final have been requested or entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER - 37 CFR § 41.37(c)(1)(v)

More specifically, the present invention, as set forth by independent claim 2, relates to a computer implemented method of identifying potential risk due to potential disruptions in material supply to a manufacturing facility (see e.g., Page 4, lines 4-6). The method includes determining a set of components for an assembled product (see e.g., Page 7, lines 3-14), storing the set of components (see e.g., Page 7, lines 3-14), determining a set of sub-components for the set of components (see e.g., Page 12, lines 12-16), storing the set of sub-components (see e.g., Page 12, lines 12-16), combining the set of components and the set of sub-components (see e.g., Page 7, lines 15-20), and identifying potential risk due to potential disruptions in material supply of a component from the set components and the set of sub-components (see e.g., Page 12, lines 15-26). The potential risk due to potential disruptions in continuity of material supply, including risks associated with supplier power risk, geopolitical risk, capital cycle risk and innovation risk (see e.g., Page 7, lines 27-28).

The present invention, as set forth by independent claim 48, relates to a computer implemented method of identifying potential risk, the risk due to potential disruptions in material supply to a manufacturing facility (see e.g., Page 4, lines 4-6), the method including identifying a set of components for an assembled product (see e.g., Page 7, lines 3-14), identifying respective sets of sub-components (see e.g., Page 12, lines 12-16), the respective sets of sub-components being combined to provide a corresponding component of the set of components (see e.g., Page 7, lines 15-20), each of the respective sets of sub-components comprising sub-components (see e.g., Page 12, lines 12-16), and identifying potential risk due to potential disruptions in continuity of material supply of any components from the set components and any sub-

components of the respective sets of sub-components (see e.g., Page 12, lines 15-26), the potential risk due to potential disruptions in continuity of material supply including risks associated with supplier power risk, geopolitical risk, capital cycle risk and innovation risk (see e.g., Page 7, lines 27-28).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL - 37 CFR § 41.37(c)(1)(vi)

Whether Claims 2-16 and 48 are properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Feldman et al., U.S. Patent Publication No. 2002/0188496 A1 (Feldman) in view of Hendrick, et al. "Production/Operations Management," Richard D. Irwin, Inc., 1985, Chapter 11, pages 226-244 (Hendrick) is respectfully requested reviewed on appeal.

VII. ARGUMENT - 37 CFR § 41.37(c)(1)(vii)

Claims 2-16 and 48 are allowable under 35 U.S.C. § 103(a) over Feldman et al., U.S. Patent Publication No. 2002/0188496 A1 (Feldman) in view of Hendrick, et al. "Production/Operations Management," Richard D. Irwin, Inc., 1985, Chapter 11, pages 226-244 (Hendrick).

The present invention generally relates to identifying potential risk due to potential disruptions in material supply to a manufacturing facility. One aspect of the invention is the appreciation that disruptions in material supply can occur from sub-components that are combined to provide components. Identifying risks associated with these sub-components can enable determining potential disruptions in material supply that would otherwise not be identified. So for example, if there were a potential disruption due to resistors that are needed to fabricate a printed circuit board, where the printed circuit board is the component being supplied to a manufacturing facility, to risk associated with the resistor would affect supply of the printed circuit board.

Feldman relates to managing supply chain risk. Feldman discloses identify which components are most critical to the assembly of a final product, in terms of placing the largest amount of revenue or profit at risk. The impact on profit and revenue of the failure to effectively deliver these critical products is then quantified. The revenue and profit distribution from the supply chain is characterized given a projected distribution supply uncertainty, taking into

consideration that input products are only useful if all of the BOM components are present. The revenue at risk is then determined. From the set of possible final products that can be produced, the portfolio of final products with the best risk-return characteristics are determined.

When discussing Feldman, the Examiner set forth:

> Feldman et al. does not expressly disclose innovation risks or determining a set of sub-components for the set of components and combining the set of components and the set of sub-components.
>
> Hendrick et al. discloses:
>
> determining a set of sub-components for the set of components (See pages 228-9 and page 231, figure 11-3 wherein subcomponents and subassemblies are determined); and
>
> combining the set of components and the set of sub-components (see page 230-232, which discuss building a bill of materials and product structure trees by combining this information; (Office action dated July 25, 2007, Page 7.)

Hendrick relates to material requirements planning (MRP) in the context of production management. Hendrick discloses bills of materials and product structure trees (see e.g., Hendrick p. 230, 231 and Figure 11-3). Hendrick further discloses requirements of a data base that is used for material requirements planning. However, neither Feldman nor Hendrick disclose or suggest identifying potential risk due to potential disruptions in material supply of components and sub-components, as required by claims 2 and 48.

In the "Response to Arguments" portion of the Final Office Action, the Examiner set forth:

> Applicant's arguments with regards to the rejections based on Feldman et al. (U.S. 2002/0188496) in view of Hendrick et al. ("Production/Operations Management") have been fully considered, but they are not persuasive. In the remarks, Applicant's argue that neither Feldman et al. nor Hendrick et al. teach or suggest identifying potential risk due to potential disruptions in material supply of components and sub-components, the potential risks including risks associated with supplier power risks, geographical risks, capital cycle risks, and innovation risks (Final Office Action dated January 8, 2008, Page 2).
>
> In response to this argument, examiner respectfully disagrees. Feldman et al. is specifically directed to identifying and monitoring supply chain risk. The supply chain supplies material, such as components and products made up of components (see title, abstract, paragraphs 10-11 and 43). Events that may occur and may disrupt the supply

chain (i.e. risks) are identified and monitored to see affect on the supply chain. See paragraphs 7, 14, 43, 45, 48, 86, and 89, which specifically disclose risks associated with geography (location, earthquakes, fires, natural disasters, etc.) and political issues (see political risk insurance, wars, political turmoil, strikes), as well as capital risks (credit risks, etc.) supplier power (labor availability, supply on hand, etc.). See also paragraphs 11-12 and 38. Feldman et al. does not expressly disclose innovation risk, but examiner took official notice that innovation risk was old and well known, which has not been challenged (see non-final action, response to arguments, dated 7/25/07) (Final Office Action dated January 8, 2008, Pages 2-3).

Further, Hendrick et al. was relied upon to teach a set of sub-components for the set of components. See pages 228-9 and page 231, figure 11-3, and page 232, which discuss building a bill of materials and product structure trees by combining this information, wherein subcomponents and subassemblies are determined Hendrick et al. and Feldman et al. are analogous (both disclose components parts being supplied by a supplier that supply the component to the manufacturer, as well as supplier, geopolitical, and capital risks associated with this supplying. Feldman et al. further discloses bill of materials and identifying the components that are assembled to produce a final product. Hendrick et al. specifically discloses determining assembly and subassembly parts, generating bill of materials, and the problems that can possibly occur when procuring different parts from different outside vendors, such as the parts coming too early, too late, etc. Therefore, Hendrick et al. and Feldman et al. do specifically meet the limitation as claimed (Final Office Action dated January 8, 2008, Page 3).

However, it is respectfully submitted that merely combining a system which manages supply chain risk by identifying which components are most critical to the assembly of a final product, in terms of placing the largest amount of revenue or profit at risk, as taught by Feldman, with a teaching of subcomponents, as taught by Hendrick, does not disclose or suggest identifying potential risk due to potential disruptions in material supply of a component from a set of components and the set of sub-components, as required by claims 2 and 48.

More specifically, Feldman and Hendrick, taken alone or in combination, do not teach or suggest a computer implemented method of identifying potential risk due to potential disruptions in material supply to a manufacturing facility where the method includes identifying *potential risk* due to *potential disruptions in material supply* of a component from the set components and *the set of sub-components* much less where the potential risk due to potential disruptions in continuity of material supply includes *risks associated with geopolitical risk, capital cycle risk and innovation risk*, all as required by claim 2. Accordingly, claim 2 is allowable over Feldman and Hendrick. Claims 3 - 16 depend from claim 2 and are allowable for at least this reason.

Feldman and Hendrick, taken alone or in combination, do not teach or suggest a computer implemented method of identifying potential risk, the risk due to potential disruptions in material supply to a manufacturing facility where the method includes *identifying respective sets of sub-components*, the respective sets of sub-components being combined to provide a corresponding component of the set of components, each of the respective sets of sub-components comprising sub-components, and identifying potential risk due to potential disruptions in continuity of material supply *of any components from the set components and any sub-components of the respective sets of sub-components*, much less where the potential risk due to potential disruptions in continuity of material supply includes *risks associated with supplier power risk, geopolitical risk, capital cycle risk and innovation risk*, all as required by new claim 48. Accordingly, claim 48 is allowable over Feldman and Hendrick.

VIII. CLAIMS APPENDIX - 37 CFR § 41.37(c)(1)(viii)

A copy of the pending claims involved in the appeal is attached as Appendix A.

IX. EVIDENCE APPENDIX - 37 CFR § 41.37(c)(1)(ix)

None

X. RELATED PROCEEDINGS APPENDIX - 37 CFR § 41.37(c)(1)(x)

There are no related proceedings.

XI. CONCLUSION

For the reasons set forth above, Applicant respectfully submits that the rejection of pending Claims 2-16 and 48 is unfounded, and requests that the rejection of claims 2-16 and 48 be reversed.

I hereby certify that this correspondence is being electronically submitted to the COMMISSIONER FOR PATENTS via EFS on May 8, 2008.

/Stephen A. Terrile/

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Respectfully submitted,

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CLAIMS APPENDIX "A" - 37 CFR § 41.37(c)(1)(viii)

2. A computer implemented method of identifying potential risk, the risk due to potential disruptions in material supply to a manufacturing facility, the method comprising:

determining a set of components for an assembled product;

storing the set of components;

determining a set of sub-components for the set of components;

storing the set of sub-components;

combining the set of components and the set of sub-components; and,

identifying potential risk due to potential disruptions in continuity of material supply of a component from the set components and the set of sub-components, the potential risk due to potential disruptions in continuity of material supply including risks associated with supplier power risk, geopolitical risk, capital cycle risk and innovation risk.

3. The computer implemented method as recited in claim 2, further comprising:

storing a country of origin of the set of components.

4. The computer implemented method as recited in claim 2, further comprising:

storing an indicia of the geopolitical risk associated with the country of origin of the set of components.

5. The computer implemented method as recited in claim 2, further comprising:

storing an identity of a supplier of the set of components.

6. The computer implemented method as recited in claim 2, further comprising:

storing an identity of an assembler of the set of components.

7. The computer implemented method as recited in claim 2, further comprising:

determining a product assembled by a manufacturer, the product including the set of components.

8. The computer implemented method as recited in claim 2, wherein the identifying potential risk further comprises:

identifying an end-of-life date of the set of components.

9. The computer implemented method as recited in claim 8, wherein the identifying potential risk further comprises:

determining whether components are at-risk due to the capital cycle risk, the capital cycle risk being determined by predictability of demand versus supply and capital flexibility.

10. The computer implemented method as recited in claim 2, further comprising:

storing the identity of a fabricator of the set of components, wherein the identity of the fabricator includes the name of the foundry.

11. The computer implemented method as recited in claim 2, wherein the identifying potential risk further comprises:

evaluating geopolitical risk based upon geographic concentration and a risk associated with a geographic location.

12. The computer implemented method as recited in claim 2, wherein the identifying potential risk further comprises:

evaluating whether components from the set of components are implicated based upon the innovation risk.

13. The computer implemented method as recited in claim 2, wherein the identifying potential risk further comprises:

evaluating whether components from the set of components are implicated based upon an identified risk due to a supplier concentration.

14. The computer implemented method as recited in claim 2, further comprising:

identifying components within a fixed period of an end-of-life date.

15. The computer implemented method as recited in claim 2, further comprising:

receiving a production plan and generating a material requirement plan for a component.

16. The computer implemented method as recited in claim 15, further comprising:

if quantities of the component are not available to support the material requirement plan for the component, identifying that shortages of the component are possible.

48. A computer implemented method of identifying potential risk, the risk due to potential disruptions in material supply to a manufacturing facility, the method comprising:

identifying a set of components for an assembled product;

identifying respective sets of sub-components, the respective sets of sub-components being combined to provide a corresponding component of the set of components, each of the respective sets of sub-components comprising sub-components; and,

identifying potential risk due to potential disruptions in continuity of material supply of any components from the set components and any sub-components of the respective sets of sub-components, the potential risk due to potential disruptions in continuity of material supply including risks associated with supplier power risk, geopolitical risk, capital cycle risk and innovation risk.

EVIDENCE APPENDIX - 37 CFR § 41.37(c)(1)(ix)

None

RELATED PROCEEDINGS APPENDIX - 37 CFR § 41.37(c)(1)(x)

There are no related proceedings.